

For class use, where very thin sections are not ordinarily required, we have found that the temperature of the knife in such a holder is sufficiently low if tap water is allowed to flow through the tube. A very short time is required for the temperature of the water to be communicated to the knife. A cooling cell such as LAND'S or GARDNER'S also regulated with tap water may be employed in addition, but its use

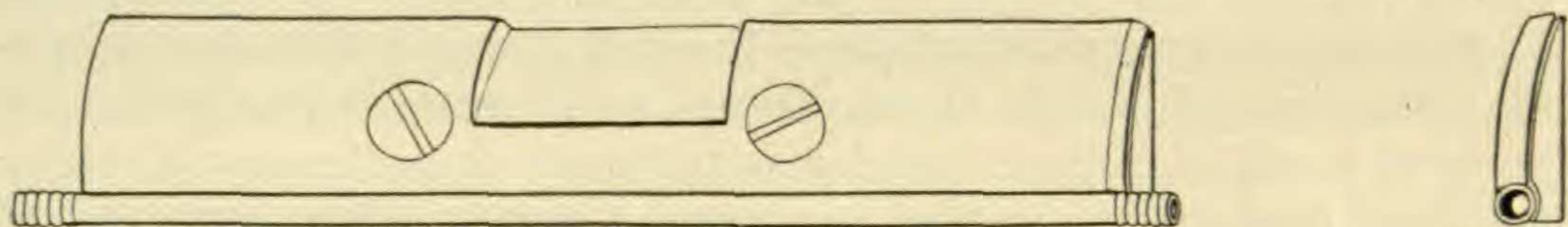


FIG. 1

in most cases is superfluous. Where sections from soft or medium paraffin under $5\ \mu$ are required, the modified safety-razor blade holder and the cooling cell are attached to GARDNER'S apparatus with the buckets filled with ice water. Under such conditions sections $2\ \mu$ thick have been cut very successfully from a paraffin melting at 53° .—T. H. GOODSPEED, *University of California*.

POLLINATION OF ASCLEPIAS CRYPTOCERAS

Being interested in the mode of pollination of *Asclepias*, I should like to know how PAYSON explains the mode of pollination given in BOT. GAZ. 61:73. 1916. By a bumblebee's foot I understand the end of the last tarsal joint with two claws and a pulvillus. Does the corpusculum become attached to the foot or to one of these appendages? If the foot is wedged between the anther wings, how does the bee get away without tearing the anther wings, and how does it, or any part of it, enter the cleft of the corpusculum? In pollination, if the bee pulls out its foot with attached corpusculum, what keeps the pollinium from coming out with it? My view of the pollination of *Asclepias*, published in BOT. GAZ. 11:262-269. 1886, and 20:110. 1895, is that a single claw, hair, pulvillus, tibial spur, or stump of a retinaculum is caught in the slit between the anther wings and is guided by them into the cleft of the corpusculum. The corpusculum keeps this appendage from again entering the slit. Only one pollinium is caught between the wings and guided into the stigmatic chamber, where it is held so firmly that a pull breaks it loose from the retinaculum. Probably *Asclepias cryptoceras* is a bumblebee flower, but I would not accept the view that it is not occasionally pollinated by other long-tongued bees, or butterflies, unless it is shown that these insects do not have proboscides long enough to reach the nectar.—CHARLES ROBERTSON, *Carlinville, Ill.*